

ADDITIONAL NOTES ON THE GENUS VITEX. X

Harold N. Moldenke

VITEX Tourn.

Additional bibliography: J. F. Gmel. in L., Syst. Nat., ed. 13, pr. 1, 2: 890 (1789) and pr. 2, 2: 890. 1796; Steud., Nom. Bot. Phan., ed. 1, 228 & 888. 1821; Guinet & Sauvage, Trav. Inst. Scient. Chérif., ser. gén., 2: 121. 1954; J. Bush-Brown, Shrubs & Trees Home Landsc. 161, 195, & 197. 1963; Martínez-Crovetto, Bonplandia 1: 177 & 198. 1963; E. Lawrence, South. Gard., ed. 2, 139, 219, & 261. 1967; Doolittle & Tiedebohl, Southwest. Gard., ed. 2, 90, 170, & 171. 1967; Vyas, Journ. Bombay Nat. Hist. Soc. 64: 219. 1967; Anon., Biol. Abstr. 49: 390 (1968) and 49 (8): S. 185. 1968; Moldenke, Phytologia 16: 487--502, 507, 509, & 512 (1968) and 17: 8--56 & 114--120. 1968; Moldenke, Résumé Suppl. 16: 1--5, 7--13, 21, 25, 29, & 30. 1968.

Doolittle & Tiedebohl (1967) point out that members of this genus when cultivated in the southwestern United States need care in transplanting, should be pruned in January, and tend to remain dormant until very late in the spring.

VITEX UNIFLORA J. G. Baker

Additional bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 2: 1214 (1895) and pr. 2, 2: 1214. 1946; Moldenke in Humbert, Fl. Madag. 174: 71, 109--111, & 273, fig. 16 (5 & g). 1956; Moldenke, Phytologia 6: 203--204. 1958; Moldenke, Résumé 157 & 479. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 2: 1214. 1960.

Illustrations: Moldenke in Humbert, Fl. Madag. 174: 109, fig. 16 (5 & 6). 1956.

VITEX URCEOLATA C. B. Clarke

Additional bibliography: Forbes & Hemsl., Fl. Sin. 2: 259. 1890; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 2: 1213 & 1214. 1895; Dunn & Tutchner, Kew Bull. Misc. Inf. Addit. Ser. 10: 204. 1912; Lam. & Bakh., Bull. Jard. Bot. Buitenz., ser. 3, 3: 55. 1921; H. N. Ridl., Fl. Malay Penins. 633. 1923; P. Dop in Lecomte, Fl. Indochine 4: 826. 1935; Fletcher, Kew Bull. Misc. Inf. 1938: 432 & 434. 1938; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 2: 1213 & 1214. 1946; Anon., Kew Bull. Gen. Index 1929-1956, 293. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 2: 1213 & 1214. 1960; Moldenke, Phytologia 8: 92. 1961; Hegnauer, Chemotax. Pfl. 3: 39. 1964.

Krukoff describes this species as a tree, 75 feet tall, the trunk 12 inches in circumference, fruiting in November. Material has been misidentified and distributed in herbaria as Teijsmanniodendron coriaceum (C. B. Clarke) Kosterm.

Additional citations: INDONESIA: GREAT LR SUNDA ISLANDS: Sumatra:

Krukoff 4244 (N, W--1750656), 4339 (N, W--1750719).

VITEX VANSTEENISI Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 27: 3121. 1953; G. Taylor, Ind. Kew. Suppl. 12: 151. 1959; Moldenke, Phytologia 8: 92. 1961.

VITEX VAUTHIERI P. DC.

Additional bibliography: Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 1: 296 (1893) and 2: 1214 (1895), pr. 2, 1: 296 (1946) and 2: 1214 (1946), and pr. 3, 1: 296 (1960) and 2: 1214. 1960; Moldenke, Phytologia 8: 93. 1961.

An isotype of this species -- Vauthier 193 -- deposited in the herbarium of the Conservatoire et Jardin Botaniques at Geneva, was photographed there by Macbride as his type photograph number 7882.

Additional citations: BRAZIL: Rio de Janeiro: Sampaio 7949 (Ja--111100); Vauthier 193 [Macbride photos 7882] (W--photo of isotype).

VITEX VELUTINA (Koord. & Val.) Koord.

Additional synonymy: Vitex velutina Koord. apud Stapf, Ind. Lond. 6: 479. 1931.

Additional bibliography: A. W. Hill, Ind. Kew. Suppl. 6: 219. 1926; Moldenke, Phytologia 8: 93 (1961) and 17: 30. 1968; Moldenke, Résumé Suppl. 16: 30. 1968.

VITEX VENULOSA Moldenke

Bibliography: Moldenke, Phytologia 4: 64--65 (1952) and 6: 210--211. 1958; Moldenke, Résumé 143 & 479. 1959; G. Taylor, Ind. Kew. Suppl. 12: 151. 1959.

VITEX VERMOESENSI DeWild.

Additional bibliography: A. W. Hill, Ind. Kew. Suppl. 8: 249. 1933; Moldenke, Phytologia 8: 93. 1961; Moldenke, Résumé Suppl. 12: 6 & 7. 1965; Moldenke, Phytologia 15: 254. 1967.

Recent collectors describe this plant as a tree, 20 m. tall, called "mebassa" or "mevassa", growing in forests, and fruiting in March. The corollas on Monteiro & Murta 209 are described as having been "clear green".

Additional citations: ANGOLA: Cabinda: Monteiro & Murta 209 (Ul); Murta 39 (Ul).

VITEX VERTICILLATA A. Chev.

Additional bibliography: Prain, Ind. Kew. Suppl. 5, pr. 1, 273. 1921; Moldenke, Phytologia 6: 213. 1958; Moldenke, Résumé 140 & 479. 1959; Prain, Ind. Kew. Suppl. 5, pr. 2, 273. 1960.

Regardless of whether or not one considers Chevalier's description of this taxon as adequate, his binomial is apparently invalidated by the Vitex verticillata of DeCandolle & Lamarck, Fl. Franc. 2: 363 (1778), and will have to be replaced if the taxon proves to

be distinct.

VITEX VESTITA Wall.

Additional synonymy: Vitex vestita "Wall. ex Kurz" apud Anon., Kew Bull. Gen. Index 1929-1956, 293. 1959. Vitex vestita "Wall. ex Schau." apud Backer & Bakh., Fl. Java 2: 605. 1965. Vitex vestita Vahl ex Moldenke, Résumé Suppl. 13: 7, in syn. 1966.

Additional & emended bibliography: Bocq., Adansonia 3: [Rev. Verbenac.] 253. 1863; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 1, 2: 1213 & 1214. 1895; C. B. Clarke in J. Schmidt, Bot. Tidskr. 26: 172. 1904; A. W. Hill, Ind. Kew. Suppl. 7: 252. 1929; P'ei, Mem. Sci. Soc. China 1 (3): [Verbenac. China] 112 & 114, pl. 22. 1932; A. W. Hill, Ind. Kew. Suppl. 9: 297. 1938; Fletcher, Kew Bull. Misc. Inf. 1938: 432 & 436. 1938; Worsdell, Ind. Lond. Suppl. 2: 500. 1941; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 2, 2: 1213 & 1214. 1946; Anon., Kew Bull. Gen. Index 1929-1956, 293. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., pr. 3, 2: 1213 & 1214. 1960; Moldenke, Phytologia 8: 93. 1961; Moldenke, Dansk Bot. Arkiv 23: 92. 1963; Backer & Bakh., Fl. Java 2: 605. 1965; Moldenke, Résumé Suppl. 13: 7. 1966; Moldenke, Phytologia 15: 111. 1967; Moldenke, Résumé Suppl. 16: 30. 1968.

Illustrations: P'ei, Mem. Sci. Soc. China 1 (3): [Verbenac. China] pl. 22. 1932.

Recent collectors describe this plant as a shrub or small tree, 1.5--5 m. tall, with yellowish-green fruit, growing on granite, in thickets, in primary forests, and "scattered by stream", at altitudes of 150--7000 feet, called "kajoe giak noenik", and fruiting in January, August, and September. Backer & Bakhuizen van den Brink (1965) describe the plant as follows: petioles 3.5--10.5 cm. long; leaflets 3, elliptic-ovate-oblong, long-acuminate at the apex, short-pubescent above, villous and copiously gland-dotted beneath, the median leaflet 11.5--20 cm. long, 4.5--11 cm. wide, on a petiolule 1.5--3.5 cm. long, the other leaflets smaller and on shorter petiolules; cymes 1--4 in each axil, tawny-pubescent; calyx and corolla with numerous rather large yellow glands on the outer surface; corolla yellow, its tube about 8 mm. long, glabrous except for a ring of hairs rather far below the insertion of the stamens and near the base inside. They comment that while the species has been recorded from Java "no Javan localities are known. Probably the plant was collected in the Bogor Botanic Garden, where it was formerly cultivated." They give its distribution as the "Western part of Malesia". In my 1963 work the distribution is given as "India, Burma, Indo-China, Thailand, and Malaya, north into southern China, east to the Lingga Archipelago, Sumatra, Java, Borneo, and the Lesser Sunda Islands".

Chand states that it is a "rare forest tree" in Assam. The corolla is described as "whitish" on A. Henry 12310, as "yellow" on Toroos 284, and "with a yellow spot in throat" on Chand 3428. The Boeea 7049 and Toroos 284 & 1236 collections are accompanied by wood sample at the University of Michigan. Toroos 1497 has

leaves that approach those of f. glabrescens Moldenke. The Boeea 8501, distributed as V. vestita, is actually V. gamosepala var. kunstleri King & Gamble.

Additional citations: INDIA: Assam: Chand 3428 (Mi), 3573 (Mi). BURMA: Shan States: Khalil s.n. [Laikaw, 1893] (W--369589). Upper Burma: Kingdon-Ward 22501 (Em). CHINA: Yunnan: A. Henry 12310 (W--459020, W--459021); J. F. Rock 7212 (W--1758335). THAILAND: Hansen, Seidenfaden, & Smitinand 10808 (Ac, Cp); Sørensen, Larsen, & Hansen 5209 (Cp). MALAYA: Selangor: Kloss s.n. [3.8. 1914] (W--2318001). INDONESIA: GREATER SUNDA ISLANDS: Banka: Anta 608 (A). Sumatra: Boeea 7049 (Mi, Mi), 9827 (Mi, Mi); Toroos 284 (Mi, Mi), 1236 (Mi, Mi), 1497 (Mi); Yates 1648 (Mi, Mi), 2140 (Mi).

VITEX VESTITA f. GLABRESCENS Moldenke

Additional bibliography: Moldenke, Phytologia 3: 489 (1951) and 8: 93. 1961.

Soepadmo calls this plant a treelet, 4 m. tall, with yellowish-green fruit, growing in sandy-loam soil on hillsides. The Toroos 1497 collection, cited under typical V. vestita Wall., has leaves which almost approach those of f. glabrescens in their pubescence.

Additional citations: INDONESIA: GREATER SUNDA ISLANDS: Sumatra: Soepadmo 181 (S).

VITEX VESTITA f. MILLSII (Henderson) Moldenke

Additional bibliography: A. W. Hill, Ind. Kew. Suppl. 8: 249. 1933; Moldenke, Phytologia 3: 489 (1951) and 6: 216--217. 1958; Moldenke, Résumé 181, 386, & 479. 1959.

VITEX VESTITA var. SIAMICA Moldenke

Bibliography: Moldenke, Phytologia 4: 65 (1952) and 6: 217. 1958; Moldenke, Résumé 179. 1959.

VITEX VESTITA f. WINKLERI Moldenke

Additional bibliography: Moldenke, Phytologia 3: 489 (1951) and 8: 94. 1961.

VITEX VILLOSA Sim

Additional bibliography: Prain, Ind. Kew. Suppl. 4, pr. 1, 248 (1913) and pr. 2, 248. 1958; Moldenke, Phytologia 6: 217--218. 1958; Moldenke, Résumé 151 & 479. 1959.

VITEX VOLKENSII Gürke

Additional & emended bibliography: Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 457. 1906; Prain, Ind. Kew. Suppl. 4, pr. 1, 248. 1913; A. W. Hill, Ind. Kew. Suppl. 8: 249. 1933; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 457. 1941; Prain, Ind. Kew. Suppl. 4, pr. 2, 248. 1958; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 3, 457. 1959; Moldenke, Phytologia 8: 94. 1961; Hocking, Excerpt. Bot.

A.4: 592. 1962.

VITEX VONDROZENSIS Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 27: 3121. 1953; Moldenke in Humbert, Fl. Madag. 174: 75, 121--123, & 273, fig. 18 (4). 1956; Moldenke, Phytologia 6: 219--220. 1958; Moldenke, Résumé 157 & 479. 1959; G. Taylor, Ind. Kew. Suppl. 12: 151. 1959.

Illustrations: Moldenke in Humbert, Fl. Madag. 174: 121, fig. 18 (4). 1956.

VITEX WATERLOTI Danguy

Additional & emended bibliography: A. W. Hill, Ind. Kew. Suppl. 7: 252. 1929; Moldenke in Humbert, Fl. Madag. 174: 76, 133--136, & 273, fig. 21 (3--5). 1956; Moldenke, Phytologia 6: 220--222. 1958; Anon., U. S. Dept. Agr. Bot. Subj. Index 15: 14361. 1958; Moldenke, Résumé 157, 391, & 479. 1959.

Illustrations: Moldenke in Humbert, Fl. Madag. 174: 135, fig. 21 (3--5). 1956.

VITEX WELLENSI DeWild.

Additional bibliography: A. W. Hill, Ind. Kew. Suppl. 8: 249. 1933; Moldenke, Phytologia 6: 222--223. 1958; Moldenke, Résumé 143 & 479. 1959.

VITEX WELWITSCHII Gurke

Additional bibliography: Durand & Jacks., Ind. Kew. Suppl. 1, pr. 1, 457. 1906; A. W. Hill, Ind. Kew. Suppl. 7: 252. 1929; F. R. Irvine, Pl. Gold Coast 437. 1930; Durand & Jacks., Ind. Kew. Suppl. 1, pr. 2, 457 (1941) and pr. 3, 457. 1959; Moldenke, Phytologia 8: 94. 1961; Moldenke, Résumé Suppl. 12: 7. 1965; Moldenke, Phytologia 15: 246--247. 1967.

Recent collectors describe this plant as a shrub or small tree, 0.5--35 m. tall, often rhizomatous, with green or dark wine-colored fruit, growing in sandy soil, in wet or dense secondary forests, Brachystegia woods, or regenerated forests after cultivation, at 1630--1700 m. altitude, flowering also in January, April, and November, fruiting in April and August, and called "munterengue". The corollas are said to have been "white with the lip blue inside" on F. A. Mendonca 2856, "with a violet lip" on Torre 2096, and "lilac with yellow throat" on E. J. Mendes 2057. Irvine (1930) remarks that Thompson 37 represents a species "near V. welwitschii". Herbarium material has been misidentified and distributed as V. grisea J. G. Baker.

Additional citations: CONGO LEOPOLDVILLE: Louis 421 (B), 2163 (B). ANGOLA: Benguela: Gosswailer 12185 (UL). Cabinda: Monteiro, Santos, & Murta 259 (UL). Huambo: E. J. Mendes 566 (UL). Huila: Antunes or Dekindt s.n. (UL); E. J. Mendes 2057 (UL, Z); R. Santos 458 (UL). Luanda: Teixeira 10 (UL). PORTUGUESE EAST AFRICA: Lourenço Marques: F. A. Mendonca 2856 (UL); Torre 2096 (Rf, UL), 6417 (UL), 7678 (UL).